511,609

(54) Title: NOISE BQLQNCED QAM DETECTION

Detect Constellation
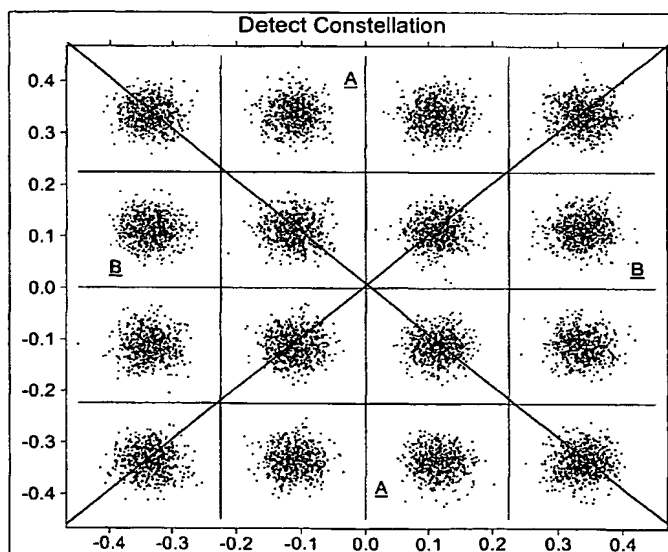
(57) Abstract: A method of demodulating digital data using M'ary QAM has been disclosed, comprising the steps of detecting a complex symbol vector D, establishing within which reference symbol boundaries the detected symbol vector D falls, the given reference symbol boundaries being associated with a complex reference vector R. Quadrature components (E_I and E_Q) of an error vector (E) constituting the difference between the detected vector D and the associated reference vector R are found and an error control signal (E') as feed back signal in the demodulation stage is approximated. The influence of thermal noise in the receiver stage has been limited by a weighting and/or by noise balancing.

WO 2004/006527 A1